**SECTION \_\_\_\_\_\_\_\_\_\_\_ STAINLESS STEEL FLAP GATES**

 GENERAL

1. The flap gates shall be provided as specified and as shown in the Contract Documents.

PERFORMANCE REQUIREMENTS

1. Leakage for the flap gates shall be restricted to 0.1 gpm/ft or less of the seal perimeter at the design seating head.

SUBMITTALS

1. Submittals shall include, at a minimum, detailed custom drawings of the gate assembly with dimensional and mounting information and a listing of the materials of construction. General arrangement drawings and cut sheets are not considered acceptable drawings.

QUALITY ASSURANCE

1. The basis for the design of the flap gates is the Model RW5000-S as manufactured by RW Gate Company, Troy, NY.
2. All gates shall be shop inspected for proper operation prior to shipment.
3. Welds shall be performed by welders with ASME Section IX certification.
4. The gate manufacturer shall be ISO 9001:2015 certified.

MATERIALS OF CONSTRUCTION

1. All stainless steel referenced in this specification shall be Type (304)(316) or Type (304L)(316L), ASTM A240 or ASTM A276 unless otherwise indicated herein.
	1. All welded stainless steel components shall be constructed of Type (304L)(316L) stainless steel.
	2. All structural stainless steel used in the construction of the flaps, frames shall have a minimum material thickness of ¼-inch.
	3. All non-welded stainless steel components, excluding anchor bolts and assembly bolts, shall be Type (304)(316) or Type (304L)(316L) stainless steel.
	4. Anchor bolts and assembly bolts shall be Type 316 stainless steel.

FLAP

1. The flap shall consist of a stainless steel plate that is reinforced with stiffeners to withstand the specified seating head conditions.
	1. The flap and reinforcing members shall have a minimum material thickness of 1/4-inch.
	2. The flap shall be reinforced with plates or channel shaped members to restrict deflection to 1/16-inch or less at the design head.
	3. The stiffeners shall be welded to the flap.

FRAME

1. The frame shall be constructed of stainless steel plate with a minimum thickness of 1/4-inch and shall be reinforced to withstand the specified operating conditions.
	1. The frame shall be a rigid, one-piece assembly of the configuration shown on the Contract Documents.
	2. The frame shall be outfitted with a resilient seal around the perimeter of the opening.
	3. Stainless steel hinge arms shall connect the flap to the frame.
	4. Flap gates that are 24” wide or wider shall have dual hinge arms. Hinge arms shall have a minimum material thickness of 1-inch.
	5. Hinge bushings shall be UHMWPE or bronze.

SEALS

1. The seal shall consist of a continuous rubber lip seal mounted around the perimeter of the opening.
	1. J-bulb seals, P-seals and D-seals are not acceptable in lieu of lip-type seals.
	2. All seals shall be secured with assembly bolts. All seals shall be field removable and field replaceable without the need to remove the gate frame from the wall.

 ANCHORAGE

1. Anchor bolts shall be 316 stainless steel, fully threaded and shall have a minimum diameter of 1/2-inch.
	1. Anchor bolts shall be of the epoxy type.

FINISH

1. All heat tint and slag from the welding process shall be passivated in accordance with ASTM A380.

INSTALLATION

1. Installation shall be performed in accordance with the gate manufacturer’s installation instructions and the approved installation drawings.
2. Installation instructions and installation drawings shall be found in the O&M manual.
3. Non-shrink grout or a resilient gasket shall be applied, by the Contractor, between the gate frame and the wall to ensure that there is no leakage around the gate.